

Claims

1. An aircraft comprising a landing gear moveable between
5 a stowed position and a deployed position, the landing gear
including a wheel having a rim around which there is mounted a
tyre, wherein the region at the junction between the tyre and
the rim is shaped such that on at least one side of the wheel,
during use of the landing gear on an aircraft when airborne
10 and the landing gear is in a position ready for landing of the
aircraft, the surface of said region interfaces smoothly with
the surfaces, presented to the airflow, of both the tyre and
the wheel, whereby noise resulting from the interaction of the
landing gear and the airflow during approach of the aircraft
15 on landing may be reduced as a result of the gap, which would
otherwise exist between the tyre and the rim, being closed.
2. An aircraft according to claim 1, wherein at least a part
of said region is flexible and so arranged that it may be
20 moved manually to reveal a portion of the tyre that is
otherwise hidden from view.
3. An aircraft according to claim 1 or claim 2, wherein said
region is defined at least partly by an elastically deformable
25 material.
4. An aircraft according to any preceding claim, wherein
said region is defined by a multiplicity of flexible elements
extending radially across the junction between the tyre and
30 the rim.
5. An aircraft according to any preceding claim, wherein said
region is defined by brushes, which bridge a gap between the
wheel rim and the tyre.

6. An aircraft according to any preceding claim, wherein at least a portion of said region is so configured that, once the force between the wheels and the ground exceeds a first given threshold force, it moves out of a gap that said region bridges when the aircraft is airborne, and once the force between the wheels and the ground drops to or below a second given threshold force, it moves back to the position in which it bridges the gap.

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7. An aircraft according to any preceding claim, wherein said region is defined by a sealing element, which bridges a gap between the wheel rim and the tyre.

15 8. An aircraft according to claim 7, wherein the sealing element is formed from liquid sealant material that has been solidified.

9. An aircraft according to any preceding claim, wherein the region at the junction between the tyre and the rim is shaped such that on both sides of the wheel, during use of the landing gear on an aircraft when airborne and the landing gear is in a position ready for landing of the aircraft, the surface of said region interfaces smoothly with the surfaces, presented to the airflow, of both the tyre and the wheel.

10. An aircraft according to any preceding claim, wherein said region is defined by a separate component part of the wheel.

30 11. An aircraft landing gear including a wheel having a rim around which there is mounted a tyre, wherein the region at the junction between the tyre and the rim is shaped such that on at least one side of the wheel, during use of the landing gear on an aircraft when airborne and the landing gear is in a

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position ready for landing of the aircraft, the surface of said region interfaces smoothly with the surfaces, presented to the airflow, of both the tyre and the wheel.

5 12. A method of reducing noise caused by an aircraft during approach of the aircraft on landing including a step of manufacturing an aircraft according to any of claims 1 to 10.

13. A method according to claim 12 further including a step of
10 modifying an existing design of an aircraft in order to reduce noise caused by the landing gear of the aircraft.

14. A component for use as said separate component of an aircraft according to claim 10.

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